

Claims

1. Tumor cells comprising a combination of MHC I and MHC II genes, occurring in humans, which genes are expressed.
2. The tumor cells according to claim 1, wherein one or several genes are also expressed for co-stimulatory molecules.
3. The tumor cells according to claim 2, wherein the co-stimulatory molecules comprise B7 and CD44.
4. The tumor cells according to any of claims 1 to 3, wherein one or several genes are also expressed for cytokines.
5. The tumor cells according to claim 4, wherein the cytokines are interleukins, GM-CSG, TNF- α and interferon- γ .
6. The tumor cells according to any of claims 1 to 5, wherein the combination of MHC I and MHC II genes is selected from the group consisting of:

Peo- Ple	HLA-A	HLA-C	HLA-B	HLA- DR	HLA- DQ	HLA- DP	Fre- quen- cy
Cor- nish (Kel- ten)	A*- 0101	Cw*- 0701	B*- 0801	DR*- 0301	DQ*- 0201	DP*- 0101	8.4%
Ger- man	A*- 0101	Cw*- 0701	B*- 0801	DR*- 0301	DQ*- 0201	DP*- 0401	4.8%
Ger- man	A*- 0101	Cw*- 0701	B*- 0701	DR*- 1501	DQ*- 0101	DP*- 0401	2.5%
USA	A*- 1001	Cw*- 0701	B*- 0801	CR*- 0301	DQ*- 0201	DP*- 0401	4.3%
Can- adian	A*- 0101	Cw*- 0701	B*- 0801	DR*- 0301	DQ*- 0201	DP*- 0101	5.1%
Au- stra-	A*- 0101	Cw*- 0701	B*- 0801	DR*- 0301	DQ*- 0201	DP*- 0101	7.6%

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Japa- nese	A*- 2401	CBL	B*- 5201	DR*- 1501	DQ*- 0101	DP*- 0901	8.2%
Japa- nese	A*- 3301	CBL	B*- 4401	DR*- 1302	DQ*- 0101	DP*- 0401	4.9%
Indi- an	A*- 2401	CBL	B*- 6101	DR*- 1501	DQ*- 0101	DP*- 0402	4.1%
Thais	A*- 0201	Cw*- 1101	B*- 4601	DR*- 0901	DQ*- 0301	DP*- 0401	4.5%
Tai- wan	A*- 2401	Cw*- 0701	B*- 3901	DR*- 1201	DQ*- 0701	DP*- 1301	10.4%
Inuit	A*- 2401	CBL	B*- 4801	DR*- 0401	DQ*- 0701	DP*- 0201	9.4%
Sin- ga- pore	A*- 0201	Cw*- 1101	B*- 4601	DR*- 0901	DQ*- 0301	DP*- 0401	7.2%
Maori	A*- 0201	Cw*- 0101	B*- 5501	DR*- 1201	DQ*- 0701	DP*- 0101	8.1%
Bush- man	A*- 3001	CW*- 0401	B*- 5801	DR*- 1301	DQ*- 0101	DP*- 0401	8.2%
North Am.- Ne- groid	A*- 3601	CW*- 0401	B*- 5301	DR*- 1101	DQ*- 0101	DP*- 0101	1.1%
Bas- que	A*- 2901	CBL	B*- 4401	DR*- 0701	DQ*- 0201	DP*- 0201	5.4%
Java- nese	ABL	CBL	B*- 6201	DR*- 1201	DQ*- 0701	DP*- 0401	8.2%
Mon- goli- an	A*- 3001	Cw*- 0601	B*- 1301	DR*- 0701	DQ*- 0201	DP*- 0201	4.0%
Ura- lic	A*- 1101	CW*- 0401	B*- 3501	DR*- 0301	DQ*- 0201	DP*- 0101	3.1%

7. The tumor cells according to any of claims 1 to 6, comprising the following combination of MHC I and MHC II genes:

A*0101; Cw*0701; B*0801; DRB1*0301; DQA1*0201; DQB1*0201; DPA1*0201; DPB1*0201.

8. The tumor cells according to any of claims 1 to 7, comprising the following combination of MHC I/II genes and genes for IFN- γ , CD44 and GM-CSF:

A*0101; Cw*0701; B*0801; DRB1*0301; DQA1*0201; DQB1*0201; DPA1*0201; DPB1*0201; IFN- γ ; CD44; GM-CSF.

9. A method for producing the tumor cells according to claim 1, comprising the steps of:

- (a) tissue typing of tumor cells,
- (b) transfection of the tumor cells with MHC I and/or MHC II genes so as to obtain a combination of these genes, occurring in humans, and
- (c) selection for tumor cells which express the MHC I and MHC II genes.

10. The method according to claim 9, wherein the tumor cells are further transfected with one or several genes coding for co-stimulatory molecules and/or cytokines and selected for the expression of these genes.

11. Tumor cell library, comprising the tumor cells according to any of claims 1 to 8.

12. Vaccines, comprising the tumor cells according to any of claims 1 to 8 and conventional auxiliary agents.

13. Use of the tumor cells according to any of claims 1 to 8, of the tumor cell library according to claim 11 or of the vaccines according to claim 12 for the prophylaxis and/or treatment of tumoral diseases.